



The 2010 Decennial Census: Background and Issues

Jennifer D. Williams

Specialist in American National Government

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Summary

On Census Day, April 1, 2010, the Bureau of the Census will fulfill the constitutional mandate for an enumeration of the U.S. population every 10 years. The Bureau's task has been summarized with deceptive simplicity: count each person whose usual residence is in the United States; count the person only once; and count him or her at the right location. In reality, the attempt to find all U.S. residents and correctly enumerate them using mail-out, mail-back census forms is increasingly complicated and expensive, and has attracted congressional scrutiny. This report discusses the major innovations planned for 2010, problems encountered in the attempt to automate certain decennial field operations, issues of census accuracy and coverage, and efforts to ensure an equitable count.

The 2010 census will use only a short-form questionnaire that asks for the age, sex, race, and ethnicity (Hispanic or non-Hispanic) of each household resident, his or her relationship to the person filling out the form, and whether the housing unit is rented or owned by a member of the household. The census long form, which for decades had collected detailed socioeconomic and housing data from a sample of the population, is being replaced by the American Community Survey, an ongoing survey of about 250,000 households per month that gathers largely the same data as its predecessor.

Another innovation for 2010 was to have been the development of highly specialized handheld computers to automate two essential census field operations: address canvassing and nonresponse follow-up (NRFU). The goal of pre-census address canvassing is the verification and correction of census maps and addresses where the census forms are to be sent. NRFU requires enumerators to try repeatedly to visit or telephone persons who have not completed their census questionnaires and obtain information from them. Testing eventually revealed such serious problems with the handheld devices that the Bureau is using them only for address canvassing and will resort to the traditional paper-based approach for NRFU. The change means that the Bureau must hire and train more NRFU staff, at increased expense. The total life-cycle cost of the 2010 census may be between \$13.7 billion and \$14.5 billion, instead of the previously estimated \$11.5 billion. The problems with the handhelds have fueled concerns that the success of the 2010 census could be at risk. Some fear, in particular, that the late-date changes to NRFU could impair census accuracy, reduce coverage, and exacerbate the recurrent likelihood of differential undercount – the greater tendency for minorities and less affluent members of society than for whites and wealthier persons to be undercounted.

Part of the Bureau's effort to maximize census accuracy and coverage is a communications strategy to publicize the census, then motivate compliance with it. The strategy includes paid advertising, Bureau partnerships with local governments and other organizations, and the Census in Schools program. In addition, the Bureau plans to make questionnaires accessible to persons who lack English proficiency or have visual or hearing impairments. About 13 million forms in Spanish and English are to be mailed to neighborhoods where Spanish-speaking residents are concentrated. Questionnaires in Spanish, Chinese, Korean, Vietnamese, and Russian, along with guides in 59 other languages, are to be available if requested. Telephone assistance, including for the hearing impaired, is to be available, as are Braille and large-print questionnaire guides.

This report will be updated as legislative or other developments warrant.

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Introduction

The U.S. Constitution – Article 1, Section 2, clause 3, as modified by Section 2 of the 14th Amendment – requires a population census every 10 years, to serve as the basis for reapportioning seats in the House of Representatives. Decennial census data also are used for within-state redistricting and in certain formulas that determine the annual distribution of several hundred billion dollars in federal and state funds.¹ Census numbers, moreover, are the foundation for constructing national and state estimates of current population size and projections of future size.² The Constitution stipulates that the enumeration is to be conducted “in such Manner as they [Congress] shall by Law direct.” Congress, through Title 13 of the *United States Code*, has delegated this responsibility to the Secretary of Commerce and, within the Department of Commerce (DOC), to the Bureau of the Census. Both the Commerce Secretary and the Census Bureau Director are appointed by the President, by and with the advice and consent of the Senate.

The Census Bureau’s mandate in conducting the once-a-decade enumeration has been summarized very simply: count each person whose usual residence is in the United States; count that person only once; and count him or her at the right location, where the person lives all or most of the time.³ Far from being simple, however, the attempt to find and correctly enumerate 100% of U.S. residents is increasingly complicated and expensive, even though Title 13 U.S.C., Section 221, requires compliance with the census. This report discusses the major innovations that were planned for the 2010 census, problems encountered with the attempt to automate certain census field operations, the persistent differential census undercount of less advantaged groups in the population, and efforts to ensure an equitable census. As **Table 1** shows, some key census operations already are underway, and others will begin soon. With Census Day, April 1, 2010, less than a year away, any impediments to a successful census require immediate attention.

¹ U.S. Bureau of the Census, “Why Fill out the Census Form?” at [http://2010.census.gov/2010census/about_2010_census/007625.html#moreinfo].

² U.S. Bureau of the Census, “Methodology for the United States Resident Population Estimates by Age, Sex, Race, and Hispanic Origin (Vintage 2008): April 1, 2000 to July 1, 2008,” at [<http://www.census.gov/popest/topics/methodology/2008-nat-meth.html>]; and U.S. Bureau of the Census, “2008 National Population Projections Methodology Summary Document” and “Methodology Summary for the Interim Population Projections for States by Age and Sex: 2004-2030,” both at [<http://www.census.gov/population/www/projections/methodology.html>].

³ See, for example, the testimony of then-Census Bureau Director Steve Murdock in U.S. Congress, House Committee on Appropriations, Subcommittee on Commerce, Justice, Science, and Related Agencies, *The Fiscal Year 2009 Budget*, hearing, 110th Cong., 2nd sess., April 3, 2008 (Washington: 2008), p. 4.

Table I. Timeline for the 2010 Census

Date	Action
January 2008	The Bureau opened regional 2010 census offices.
Fall 2008	Recruitment began for workers to staff “early” local census offices.
Spring through Mid-Summer 2009	Census field workers began and are to complete address canvassing nationwide to update census maps and verify addresses. The purpose of this operation is to obtain a corrected address list for mailing out census questionnaires and following up with households that do not return their forms (nonresponse follow-up).
Fall 2009	The Bureau is to open the remaining local census offices and begin recruiting enumerators needed for the peak census workload in 2010.
February through March 2010	U.S. households are to receive their census questionnaires.
April 1, 2010	Census Day arrives.
April through July 2010	Census enumerators are to conduct nonresponse follow-up.
September through December 2010	Regional and local census offices are to close.
December 31, 2010	The Bureau must deliver to the President the official state population counts for House reapportionment.
March 31, 2011	The Bureau must finish delivering redistricting data to the states.
April through December 2011	The Bureau is to produce and deliver other 2010 census data products.

Sources: Adapted from U.S. Bureau of the Census, “2010 Census Timeline: Key Dates,” at [http://2010.census.gov/2010census/about_2010_census/013279.html], and unpublished material from the Bureau.

The Short-Form-Only Census and the American Community Survey

A brief overview of modern census-taking shows how the Bureau has collected the decennial data from 1940 onward. In that year, for the first time, the census questionnaire, or “schedule,” contained 16 “supplementary questions” asked of a five-percent sample of the population.⁴ Sampling continued to be done in conjunction with the 1950 through 2000 censuses, and in 1970 the census became largely a mail-out, mail-back operation.⁵ In 2000, for example, the Bureau sent a set of basic questions on a “short form” to most housing units; a sample of housing units –

⁴ The Bureau’s first-ever use of sampling was not in the decennial census, but in a 1937 survey that gauged the extent of unemployment in the nation during the Great Depression. See U.S. Bureau of the Census, “History: Developing Sampling Techniques,” at [http://www.census.gov/history/www/data_collection/010868.html] and “History: 1940 (Population),” at [http://www.census.gov/history/www/index_of_questions/012309.html].

⁵ U.S. Bureau of the Census, “History: 1970 (Population),” at [http://www.census.gov/history/www/index_of_questions/012315.html].

about 17% – received a “long form” containing these questions and others designed to gather socioeconomic and housing data for various legislative and program purposes. The forms were delivered to housing units on the Bureau’s address list, with instructions that respondents were to complete and return them.⁶

Departing from recent enumerations, the 2010 census will use only a short-form questionnaire. It will ask for the age, sex, race, and ethnicity (Hispanic or non-Hispanic) of each person in a household, as well as the individual’s relationship to the person filling out the form. The form also will include a question about “tenure,” that is, whether the housing unit is rented or owned by a member of the household.⁷

The long form is being replaced by the American Community Survey (ACS), an ongoing survey of about 250,000 households per month that, with few exceptions, gathers the same data as its predecessor. The Bureau cites the more timely availability of information as a key benefit of the ACS.⁸ It provides annual data for areas with populations of at least 65,000 persons, including the total United States, all states and the District of Columbia, all congressional districts, about 800 counties, and 500 metropolitan and micropolitan statistical areas. For less populous areas, the Bureau is producing multi-year averages based on ACS data collected over several years. In 2008, the Bureau released the first three-year averages for areas with 20,000 or more persons, and by 2010 five-year averages will be available for areas with fewer than 20,000 persons.⁹

Automated Field Operations

Another innovation for 2010 was to have been the automation of two major census field operations: address canvassing and nonresponse follow-up (NRFU). The goal of pre-census address canvassing is for temporary Bureau field staff to verify and correct census maps and addresses where the census forms are to be sent. Accurate addresses and maps, technically called the “Master Address File” (MAF) and “Topologically Integrated Geographic Encoding and Referencing” (TIGER) system, are essential for directing the census forms to the right housing units and successfully conducting nonresponse follow-up. Indeed, as the Bureau has noted, “MAF/TIGER is the foundation of the Census – it creates the universe for all other operations that collect information from the public.”¹⁰ NRFU requires that enumerators try repeatedly to visit or telephone persons who have not completed their census questionnaires and convince them to respond. Because of the problems discussed below, only address canvassing, not NRFU, will be automated.

⁶ U.S. Bureau of the Census, *Measuring America: The Decennial Censuses from 1790 to 2000* (Washington: GPO, 2002), p. 98.

⁷ U.S. Bureau of the Census, “Questions Planned for the 2010 Census and American Community Survey,” p. vii, at [<http://2010.census.gov/2010census/pdf/2010ACSnotebook.pdf>]. The short form also will ask certain questions for administrative purposes, such as number of persons living in the housing unit on April 1, 2010, their names, and the telephone number of the person completing the form. The Bureau cites the following uses for this information: “ensuring response accuracy and completeness, contacting respondents with incomplete or missing information, and assigning cases to census operations designed to improve accuracy.” *Ibid.*, p. 7a.

⁸ U.S. Bureau of the Census, “About the ACS: What Is the Survey?” at [<http://www.census.gov/acs/www/SBasics/What/What1.htm>].

⁹ *Ibid.*

¹⁰ U.S. Bureau of the Census, *United States Census 2010, High Risk Improvement Plan*, version 7-2, November 4, 2008, p. 2.

Problems Encountered

As part of its 2010 census preparations, the Bureau contracted with the Harris Corporation for Field Data Collection Automation (FDCA). The objective was the development of highly specialized handheld computers to automate address canvassing and update maps with global positioning software (GPS), as well as conduct nonresponse follow-up. Testing eventually revealed significant flaws in the handhelds, such as slow operation, memory problems, and a tendency to lock up when users entered large quantities of data.¹¹ In April 3, 2008 congressional testimony, then-Bureau Director Steve Murdock acknowledged that the Bureau had abandoned the plan to use the handhelds for NRFU, would resort to the traditional paper-based approach, and would rely on the handhelds only for address canvassing.¹² The change will require the Bureau to hire and train more NRFU staff, at increased expense.¹³ The Government Accountability Office (GAO) testified to Congress in mid-2008 that the Bureau now estimates the total life-cycle cost of the 2010 census at between \$13.7 billion and \$14.5 billion, instead of the previously estimated \$11.5 billion.¹⁴

Assessments by the DOC Inspector General and GAO

On November 18, 2008, the Commerce Department's Office of Inspector General (OIG) issued a report that identified the top management challenges the Department faced as it prepared for the transition to a new President and new DOC Secretary. Heading the list was the need to "overcome the setbacks experienced in reengineering decennial processes and conduct a successful 2010 Census." The failure of the handhelds was prominent among the setbacks noted. According to the report, the Bureau "originally intended to develop the handhelds in-house and tested prototypes in ... 2004 and 2006. The devices had serious problems in both tests," which, in the OIG's view, "should have better informed the bureau's efforts to define requirements."¹⁵ The decision to contract for FDCA came "too late in the decade ... to meet ambitious fixed deadlines for the dress rehearsal tests starting in 2007 and decennial operations starting in 2009." Not until January 2008, almost two years after awarding the contract, did the Bureau deliver "a first draft of a complete, user-validated set of requirements for the handhelds and supporting infrastructure."¹⁶ By then, the MITRE Corporation, which periodically advised the Bureau about its information technology (IT) programs for the 2010 census, had found that

¹¹ U.S. Government Accountability Office, *Information Technology: Census Bureau Testing of 2010 Decennial Systems Can Be Strengthened*, GAO-09-262, March 2009.

¹² Testimony of Census Bureau Director Steve Murdock in U.S. Congress, House Committee on Appropriations, Subcommittee on Commerce, Justice, Science, and Related Agencies, *The Fiscal Year 2009 Budget*, hearing, 110th Cong., 2nd sess., April 3, 2008 (Washington: 2008).

¹³ U.S. Department of Commerce, Office of Inspector General, *Top Management Challenges Facing the Department of Commerce*, Final Report, no. OIG-19384 (Washington: U.S. Department of Commerce, 2008), p. 1.

¹⁴ U.S. Government Accountability Office, *2010 Census: Plans for Decennial Census Operations and Technology Have Progressed, but Much Uncertainty Remains*, GAO-08-886T, June 11, 2008.

¹⁵ U.S. Department of Commerce, Office of Inspector General, *Top Management Challenges Facing the Department of Commerce*, Final Report, no. OIG-19384 (Washington: U.S. Department of Commerce, 2008), p. 2.

¹⁶ Ibid.

FDCA is in serious trouble. It is not clear the system will meet Census' operational needs and quality goals. The final cost is unpredictable. Immediate, significant changes are required to rescue the program. However, the risks are so large considering the available time that we recommend immediate development of contingency plans to revert to paper operations.¹⁷

The OIG report acknowledged that the Bureau had taken important actions, such as management changes and better oversight, to address these problems, but stated that "significant risks remain for the 2010 decennial."¹⁸

Similarly, the Government Accountability Office repeatedly pointed out vulnerabilities in the Bureau's management of its information technology systems, including the handheld computers.¹⁹ In a November 6, 2008 press release to announce its new presidential transition website, GAO included the upcoming census among its 13 "urgent issues ... needing the attention of [then] President-Elect Obama and the 111th Congress during the transition and the first year of the new administration and Congress."²⁰ The 2010 census, in large part because of IT problems and a yet-to-be-determined, but substantial, total cost, remained one of the areas GAO designated as "high risk" in a January 2009 update of its high-risk series.²¹ Among the concerns GAO noted in a March 2009 report were the following:

The Dress Rehearsal²² was originally conceived to provide a comprehensive end-to-end test of key 2010 census operations; however, ... because of the problems encountered with the handheld devices, among other things, testing was curtailed. As a result, although several critical operations underwent end-to-end testing in the Dress Rehearsal, others did not. According to the Associate Director for the 2010 census, the Bureau tested approximately 23 of 44 key operations during the Dress Rehearsal. Examples of key operations that underwent end-to-end testing ... are address canvassing and group quarters validation.²³ An example of a key operation that was not tested is the largest field operation – nonresponse follow-up. ...

In December 2008, after additional development and improvements to the handheld computers, the Bureau conducted a limited field test for address canvassing, intended to assess software functionality in an operational environment. We observed this test and determined that users were generally satisfied with the performance of the handhelds. ...

¹⁷ Ibid., pp. 3-4. The MITRE quotation appeared in Allan Holmes, "Census program to use handheld computers said to be in 'serious trouble'," *GovernmentExecutive.com*, January 2, 2008, at [http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0108/010208h1.htm]. This article contained a link to the source of the quotation, MITRE's November 29, 2007, "Talking Points for Meeting with [then-Census Bureau Deputy Director] Jay Waite."

¹⁸ U.S. Department of Commerce, Office of Inspector General, *Top Management Challenges Facing the Department of Commerce*, Final Report, no. OIG-19384 (Washington: U.S. Department of Commerce, 2008), p. 2.

¹⁹ See, for example, U.S. Government Accountability Office, *Information Technology: Census Bureau Needs to Improve Its Risk Management of Decennial Systems*, GAO-08-79, October 5, 2007.

²⁰ U.S. Government Accountability Office, Office of the Comptroller General, "GAO Lists Top 'Urgent Issues' for Next President and Congress; Unveils New Transition Web Site," press release, November 6, 2008, p. 1.

²¹ U.S. Government Accountability Office, *High-Risk Series: An Update*, GAO-09-271, January 22, 2009.

²² "During the Dress Rehearsal period, running from February 2006 through June 2009, the Bureau is developing and testing systems and operations, and it held a mock Census Day on May 1, 2008." U.S. Government Accountability Office, *Information Technology: Census Bureau Testing of 2010 Decennial Systems Can Be Strengthened*, GAO-09-262, March 2009, p. 9. The Bureau will do supplementary testing in addition to the Dress Rehearsal tests. Ibid., p. 10.

²³ Group quarters, the addresses of which have to be validated, include college residence halls and group homes. U.S. Government Accountability Office, *Information Technology: Census Bureau Testing of 2010 Decennial Systems Can Be Strengthened*, GAO-09-262, March 2009, p. 3.

However, the test ... included only a limited subset of functionality to be used during the 2009 address canvassing operations.²⁴

GAO further observed that although nonresponse follow-up has been paper based in previous censuses, the paper-based NRFU in 2010 will use “newly developed systems which have not yet been fully tested in a census-like environment.... Any significant change to an existing IT system introduces the risk that the system may not work as intended; therefore, testing all systems after changes have been made ... is critical to the success of the 2010 census.”²⁵ GAO noted that “testing has only recently started” for the 2010 NRFU,²⁶ including the IT systems and infrastructure necessary to support this operation and certain other activities such as group-quarters enumeration.²⁷

Census Accuracy and Coverage

As noted at the beginning of this report, the idealized expectation that the decennial census should count every person once, only once, and in the right place is deceptively simple. In reality, the task is immense and a perfect count elusive. The failure of the handhelds for nonresponse follow-up has fueled concerns, like those of GAO noted above, that the late-date alterations to NRFU could threaten the success of the 2010 census.

The attempt to achieve complete, accurate population coverage is challenging not only because the U.S. population includes more than 306 million persons who tend to be mobile and are distributed over a wide geographic area, but also because the population is increasingly heterogeneous. Many households consist of racial and ethnic minorities; multiple families; low-income persons; inner-city residents; those whose living circumstances are atypical; international migrants to the United States who may lack English language proficiency, lack legal status in this country, or distrust all governmental activities; or various combinations of these attributes. Any of them can make enumeration difficult, and some of them contribute markedly to the recurrent undercount of racial and ethnic minorities.

An overcount of some groups within the population can occur to the extent that the Bureau receives multiple census forms from the same persons or households, then does not capture and eliminate the duplications. A husband and wife, for example, might own a vacation home and fill out a questionnaire there as well as at their usual residence. Another example would be parents who erroneously list a child on the form for their household, when the child actually is away at college and, in accordance with census residence rules, has been correctly enumerated there.

The greater tendency for minorities and less affluent members of society than for whites and wealthier persons to be undercounted leads to differential undercounts of the former. Differential undercounts are a recurrent problem in the decennial census and can diminish the perception that the count is equitable, or fair, to the entire population.

²⁴ Ibid., pp. 21-22.

²⁵ Ibid., p. 28.

²⁶ Ibid., p. 17.

²⁷ Ibid., p. 4.

Estimates of Census Coverage from Demographic Analysis

Following the 1940 census, “Census Bureau statisticians and academic researchers refined a statistical technique known as Demographic Analysis”(DA)²⁸ that has been used to evaluate coverage and estimate net undercount²⁹ in the 1940 through 2000 censuses. DA takes the population count from one decennial census and uses administrative birth and death records, together with estimates of net international migration to the United States during the decade, to estimate the population size at the next census date. This figure then is compared with the population count from the next census to arrive at estimates of coverage and net undercount. The Bureau has described the process as follows:

The traditional DA population benchmarks are developed for the census date by analyzing various types of demographic data essentially independent of the census, such as administrative statistics on births, deaths, authorized international migration, and Medicare enrollments, as well as estimates of legal emigration and net unauthorized immigration. The difference between the Demographic Analysis benchmarks and the census count provides an estimate of the census net undercount. Dividing the net undercount by the DA benchmark[s] provides an estimate of the net undercount rate.³⁰

Despite its utility, demographic analysis has its limitations. Among them are the feasibility of producing estimates only at the national level, not at lower geographic levels, and only for broad racial categories (black and non-black).³¹ Uncertainty in estimating the components of net international migration to the United States, particularly emigration, temporary migration, and unauthorized migration, is another concern in DA.³² According to the Bureau, “the research effect on immigration, births, and deaths led to Revised DA estimates” for 1990 and 2000. “The Revised DA lowered the estimated net undercount rates from 1.85 to 1.65 percent in 1990, and from 0.32 to 0.12 percent in 2000, but did not alter the DA finding that the estimated net undercount rate in 2000 was substantially lower than in 1990.”³³

Table 2 shows net percentage undercount estimates for the past seven censuses, as derived by demographic analysis. The last two columns of the table, for 1990 and 2000, reflect the revised DA estimates discussed above. The table indicates a decrease in the estimated net undercount rates for the total population, blacks, and non-blacks in every census year except 1990, when the rates increased for the overall population and the two groups within it. In each of the seven censuses, the differential undercount persisted: the estimated net rate for blacks was higher than for non-blacks.

²⁸ U.S. Bureau of the Census, *Accuracy and Coverage Evaluation, Statement on the Feasibility of Using Statistical Methods to Improve the Accuracy of Census 2000*, June 2000 (unpublished document), p. 4.

²⁹ “The difference between the true, but unknown, population count and an original census count is called the net undercount.” Kirk M. Wolter, “Accounting for America’s Uncounted and Miscalculated,” *Science*, vol. 253 (July 1991), p. 12.

³⁰ U.S. Bureau of the Census, *Coverage Measurement from the Perspective of March 2001 Accuracy and Coverage Evaluation*, Census 2000 Topic Report No. 4 (Washington: U.S. Bureau of the Census, February 2004), p. 7.

³¹ *Ibid.*, p. 9.

³² *Ibid.*, p. 7.

³³ *Ibid.*

Table 2. Percentage Net Decennial Census Undercount by Race, as Estimated by Demographic Analysis, 1940 through 2000

	1940	1950	1960	1970	1980	1990	2000
Total population	5.4%	4.1%	3.1%	2.7%	1.2%	1.65%	0.12%
Black	8.4%	7.5%	6.6%	6.5%	4.5%	5.52%	2.78%
Non-black	5.0%	3.8%	2.7%	2.2%	0.8%	1.08%	-0.29%

Sources: Estimates for 1940 through 1980 are from J.G. Robinson, et al., "Estimates of Population Coverage in the 1990 United States Census Based on Demographic Analysis," *Journal of the American Statistical Association*, vol. 88 (September 1993), p. 1065, reprinted in U.S. Bureau of the Census, *Accuracy and Coverage Evaluation, Statement on the Feasibility of Using Statistical Methods to Improve the Accuracy of Census 2000*, June 2000 (unpublished document). Estimates for 1990 and 2000 are from U.S. Bureau of the Census, *Coverage Measurement from the Perspective of March 2001 Accuracy and Coverage Evaluation*, Census 2000 Topic Report No. 4 (Washington: U.S. Bureau of the Census, February 2004), p. 9.

Note: All numbers except one indicate net percentage undercounts of the total population or of groups within the population. The exception, -0.29% for non-blacks in 2000, indicates a net overcount of this group.

Survey Estimates of Census Coverage

To evaluate coverage in the three most recent enumerations, the Bureau used not only demographic analysis, but other means as well: in 1980, the Post Enumeration Program (PEP); in 1990, the Post Enumeration Survey; and in 2000, Accuracy and Coverage Evaluation (ACE). Each evaluation involved taking a post-census survey, designed to be statistically independent of the census, and comparing the survey with the census results to estimate omissions from the census and erroneous enumerations. As with all surveys, these were subject to sampling and other errors.

- The 1980 census Post Enumeration Program yielded informative studies of the estimation methods and results, rather than specific coverage estimates.³⁴
- The 1990 census Post Enumeration Survey estimates indicated a net percentage undercount of 1.61% for the total population, 0.68% for non-Hispanic whites, 4.57% for blacks, 2.36% for Asians or Pacific Islanders, 12.22% for American Indians on reservations, and 4.99% for Hispanics.³⁵
- The presentation of data by race and ethnicity changed somewhat between the 1990 and 2000 censuses, making certain categories (for example, "blacks" in 1990 versus "non-Hispanic blacks" in 2000) not perfectly comparable. The final 2000 census Accuracy and Coverage Evaluation estimates indicated a net percentage overcount of -0.49% for the total population, -1.13% for non-Hispanic whites, -0.75% for non-Hispanic Asians, and -0.88% for American Indians on reservations (with each minus sign signifying an overcount). The

³⁴ U.S. Bureau of the Census, *Accuracy and Coverage Evaluation, Statement on the Feasibility of Using Statistical Methods to Improve the Accuracy of Census 2000*, June 2000 (unpublished document), p. 20.

³⁵ U.S. Bureau of the Census, *A.C.E. Revision II, Summary of Estimated Net Coverage*, Memorandum Series PP-54, December 31, 2002, p. 3, at [<http://www.census.gov/dmd/www/ace2.html>].

estimated net percentage undercount for non-Hispanic blacks was 1.84%; for native Hawaiians or other Pacific Islanders, 2.12%; for American Indians off reservations, 0.62%; and for Hispanics, 0.71%.³⁶

Coverage Evaluation Surveys and the Census Adjustment Issue

Although conducting surveys to evaluate census coverage is an established practice, the survey results never have been used to correct or “adjust” miscounts in the decennial numbers that constitute the official state population counts for House reapportionment. The Supreme Court ruled in 1999 (525 U.S. 316 (1999)) that adjustment of the reapportionment numbers would be illegal under Title 13 U.S.C., Section 195, but was silent about whether it would be unconstitutional. The issue has been contentious for more than two decades and, despite the 1999 Court ruling, continues to generate controversy. Whereas supporters of adjustment argue that it is necessary to rectify the undercount problem, opponents maintain that use of the procedure would make the census vulnerable to political manipulation.

Acting Bureau Director Thomas Mesenbourg, asked by the ranking Member of the House Subcommittee on Information Policy, Census, and National Archives in a March 5, 2009 census oversight hearing if the Bureau will conduct a 2010 census coverage evaluation survey, replied that it will and that “[t]he sample size will be about 300,000 housing units,” as in the 2000 census Accuracy and Coverage Evaluation.³⁷ “The focus of the 2010 coverage measurement program,” according to the Acting Director, “is to provide better information about the components of error. So we’ll be providing data not only on the net error, but also components of error such as duplicates, omissions, and so on.”³⁸ The coverage measurement program will serve both to evaluate the 2010 census and to indicate how the 2020 enumeration can be improved. The Acting Director, questioned about whether the Bureau intends to use the program for adjustment, answered that it does not.³⁹

Nevertheless, the Obama Administration’s nominations of Gary Locke, the former Governor of Washington, to be Commerce Secretary and Robert Groves, a statistician and demographer, for Census Bureau Director have provided occasions for some Members of Congress to seek further assurance that sampling for adjustment will not play a role in the 2010 census.

Secretary-designate Locke told the Senate Committee on Commerce, Science, and Transportation at his March 18, 2009 confirmation hearing, “The Supreme Court has made it very clear that statistical sampling is not permissible for apportionment purposes. That is the law. We will enforce the law.”⁴⁰ The committee’s ranking Member then noted that “the Supreme Court did not specifically mention the intrastate redistricting,” and asked whether sampling will be used to adjust the data for this purpose.⁴¹ The nominee replied, “It is my understanding that there are no

³⁶Ibid.

³⁷ Testimony of Acting Census Bureau Director Thomas Mesenbourg in U.S. Congress, House Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, *Critical Operations of the 2010 Census – Status Update*, hearing, 111th Cong., 1st sess., March 5, 2009 (Washington: 2009).

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ U.S. Congress, Senate Committee on Commerce, Science, and Transportation, “Senator Hutchison Presses Commerce Nominee Locke to Ensure a Fair and Open Census Process,” press release, March 18, 2009, p. 2.

⁴¹ Ibid.

plans in the Department of Commerce or the Census Bureau to use any type of statistical sampling with respect to [the] population count.”⁴² On March 24, 2009, the Senate confirmed Locke’s nomination.⁴³

The Senate has yet to consider Robert Groves’s nomination. The Director-designate heads the University of Michigan’s Survey Research Center. From 1990 to 1992, he was an Associate Director of the Census Bureau,⁴⁴ where, according to press reports, he differed with George H.W. Bush Administration officials over his support for 1990 census adjustment.⁴⁵ Groves’s nomination reportedly has won acclaim as well as drawn concern from some key Members of Congress, with reactions tending to divide along party lines.⁴⁶

Efforts Toward an Equitable Census

Communications Outreach

With census accuracy and coverage likely to persist as issues for decennial count, the Bureau is addressing the need to publicize the census, then convince as many persons as possible to complete and return their 2010 census questionnaires. The various components of the Bureau’s integrated communications strategy have this two-part goal in common. As GAO has observed, however, motivating the public to respond to the census is “a far thornier task” than raising awareness about it.⁴⁷

On September 6, 2007, the Bureau announced that it had awarded the 2010 census communications contract to Draftfcb of New York City. Draftfcb will head a team of communications firms that specialize in reaching minority groups: Global Hue, for blacks and Hispanics; IW Group, for Asians, Native Hawaiians, and other Pacific Islanders; G&G, for American Indians and Alaska Natives; and Allied Media for “emerging” groups such as Arabic-speaking persons and Eastern Europeans.⁴⁸ The integrated communications strategy includes the partnership and Census in Schools programs, as well as paid advertising planned for network and cable television, radio, the Internet, newspapers, and magazines.⁴⁹

⁴² Ibid.

⁴³ “Department of Commerce, Gary Locke, of Washington, to be Secretary of Commerce,” *Congressional Record*, daily edition, vol. 155 (March 24, 2009), p. S3734.

⁴⁴ The White House, Office of the Press Secretary, “President Obama Announces More Key Administration Posts,” press release, April 2, 2009.

⁴⁵ See Carrie Dann, “Census Nomination Renews ‘Statistical Adjustment’ Debate,” *Congress Daily AM*, NationalJournal.com, April 3, 2009, at [http://www.nationaljournal.com/congressdaily/cda_20090403_1388.php]; Randy James, “Robert M. Groves: Obama’s Pick for Census Chief,” *Time*.com, April 7, 2009, at [<http://www.time.com/time/nation/article/0,8599,1889793,00.html>]; and “Obama Taps Robert Groves to Be Census Director,” *Fox News*.com, April 2, 2009, at [<http://www.foxnews.com/politics/first100days/2009/04/02/obama-taps-robert-groves-census-director/>].

⁴⁶ Ibid.

⁴⁷ U.S. Government Accountability Office, *2010 Census: Communications Campaign Has Potential to Boost Participation*, GAO-09-525T, March 23, 2009.

⁴⁸ U.S. Bureau of the Census, “Census Bureau Announces Award of 2010 Census Communications Contract,” press release, September 7, 2007.

⁴⁹ U.S. Bureau of the Census, *2010 Census Integrated Communications Campaign Plan*, August 2008, pp. 149-150, at (continued...)

For the 2010 census, as for that in 2000, the Bureau is seeking partners from local governments, community organizations, neighborhood groups, businesses, and the media to help inform the public about the census and encourage participation in it. Partnership information, including an application form that a prospective partner can fill out, is available on the Bureau's website.⁵⁰

Among the activities the Bureau has suggested for local governments, businesses, organizations, and groups are distributing census promotional materials, sponsoring events to raise awareness about the census, and disseminating information about it through newsletters. Partnership staff, working with elected officials, are forming Complete Count Committees to reach traditionally undercounted groups. Early in 2009, the Bureau mailed Complete Count Committee guides to the highest elected officials in 39,000 state, local, and tribal governments.⁵¹

Partners also can help recruit temporary census workers, such as enumerators for nonresponse follow-up, and provide space for testing and training them. The Bureau's website gives information about 2010 census employment, including how to apply for jobs.⁵²

The Bureau invited local-government partners to participate, as they did for the 2000 census, in the Local Update of Census Addresses (LUCA) campaign. LUCA was made possible by P.L. 103-430 (108 Stat. 4394) to assist the Bureau in improving the Master Address File. Under the program, local, state, and tribal governments may review MAF and document any mistakes they find in it. LUCA for the 2010 census began in January 2007. According to the Bureau, it has received the LUCA data and entered them into MAF.⁵³ LUCA participants may review the changes made and appeal, to the LUCA Appeals Office, requested changes that were not accepted.⁵⁴

The Census in Schools initiative for 2010 is focused on educating children in kindergarten through 12th grade about the importance of census participation, a message that the Bureau intends for them to carry home to their parents.⁵⁵ Scholastic, Inc., is joining with the Bureau to produce English and Spanish teaching guides, lesson plans, maps, brochures, and materials for students to take home. Materials are to be available electronically on the Census-in-Schools

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[http://2010.census.gov/2010census/pdf/2010_ICC_Plan.pdf].

⁵⁰ U.S. Bureau of the Census, "Partner with the Census Bureau," at [http://2010.census.gov/2010census/more_information/007657.html]. For an example of an application form from a regional census office, see "The Charlotte Region," "Partner Information," at [<http://www.census.gov/rocha/www/>].

⁵¹ Testimony of Acting Census Bureau Director Thomas Mesenbourg in U.S. Congress, House Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, *Census 2010: Assessing the Bureau's Strategies for Reducing the Undercount of Hard-to-Count Populations*, hearing, 111th Cong., 1st sess., March 23, 2009 (Washington: 2009), p. 5.

⁵² U.S. Bureau of the Census, "How to Apply," at [<http://2010.census.gov/2010censusjobs/howtoapply.php>].

⁵³ Information obtained at a December 18, 2008, meeting between the author and officials from the Census Bureau's Decennial Management Division, Office of the Associate Director for Communications, and Congressional Affairs Office.

⁵⁴ U.S. Bureau of the Census, "2010 Decennial Census Local Update of Census Addresses (LUCA)," at [<http://www.census.gov/geo/www/luca2010/luca.html>].

⁵⁵ Testimony of then-Census Bureau Director Steve Murdock in U.S. Congress, House Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, *The 2010 Census Communications Campaign*, hearing, 110th Cong., 2nd sess., July 10, 2008 (Washington: 2008), pp. 4-5.

website⁵⁶ and on Scholastic.com. Printed materials are to be distributed to public and private schools nationwide.⁵⁷

Questionnaire Outreach

The Bureau plans to mail about 13 million bilingual 2010 census forms, in Spanish and English, to neighborhoods with high concentrations of Spanish-speaking residents. Questionnaires in Spanish, Chinese, Korean, Vietnamese, and Russian, along with guides in 59 other languages, are to be available upon request.⁵⁸ In addition, for persons who did not receive census forms at their homes, “Be Counted” forms in English and the five other languages listed above are to be placed in various public locations. The Bureau intends to provide telephone assistance, including assistance for the hearing impaired, as well as Braille and large-print questionnaire guides.⁵⁹

Protecting Respondents’ Confidentiality and Census Objectivity

The Census Bureau is staffed by federal career civilians, many of whom are trained as statisticians, demographers, and IT professionals. Chapter 7 of Title 13 U.S.C. provides for a series of penalties for any Bureau officer or employee found to have committed certain offenses. These penalties have been adjusted in accordance with provisions of the Sentencing Reform Act of 1984, Title 18 U.S.C., Sections 3559 and 3571. Whoever neglects or refuses to perform his or her duties (Title 13, Section 212) can be fined not more than \$5,000. A Bureau officer or employee can be fined not more than \$250,000 or imprisoned not more than five years, or both, if the person “willfully and knowingly swears or affirms falsely as to the truth of any statement required” of him or her; “willfully and knowingly makes a false certificate or fictitious return”; or “knowingly or willfully” supplies or supplied “any false statement or false information with reference to any inquiry” for which the person “was authorized and required to collect information” (Title 13, Section 213). Wrongful disclosure of confidential information (Title 13, Section 214) can result in a fine of not more than \$250,000 or not more than five years’ imprisonment, or both. Besides operating under these constraints, workers hired for the 2010 census must undergo, according to the Bureau, background checks that include fingerprinting.⁶⁰ The Bureau has estimated the cost of fingerprinting at about \$450 million.⁶¹

⁵⁶ U.S. Bureau of the Census, “Census in Schools,” at [<http://www.census.gov/schools/>].

⁵⁷ Testimony of Acting Census Bureau Director Thomas Mesenbourg in U.S. Congress, House Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, *Census 2010: Assessing the Bureau’s Strategies for Reducing the Undercount of Hard-to-Count Populations*, hearing, 111th Cong., 1st sess., March 23, 2009 (Washington: 2009), pp. 3–4.

⁵⁸ U.S. Bureau of the Census, “An Introduction to the 2010 Census,” at [<http://2010.census.gov/2010census/pdf/OverviewRelease.pdf>].

⁵⁹ Testimony of then-Census Bureau Director Steve Murdock in U.S. Congress, House Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, *The 2010 Census Communications Campaign*, hearing, 110th Cong., 2nd sess., July 10, 2008 (Washington: 2008), p. 5.

⁶⁰ U.S. Government Accountability Office, *2010 Census: Census Bureau Should Take Action to Improve the Credibility and Accuracy of Its Cost Estimate for the Decennial Census*, GAO-08-554, June 2008, p. 16.

⁶¹ Ibid.

The Bureau Director, in contrast to other Bureau officers and employees, is a presidential appointee. News articles,⁶² early in the Obama Administration, stating that the Director might report to the White House instead of, as Title 13 U.S.C. stipulates, the Commerce Secretary,⁶³ raised concern among some Members of Congress that the 2010 count could be subject to political manipulation. Subsequent articles⁶⁴ about Administration assurances that the Director would continue reporting to the Secretary have not entirely allayed this concern. Gary Locke, speaking to the Senate Commerce, Science, and Transportation Committee March 18, 2009 before his confirmation as Commerce Secretary, emphasized that the decennial census “will be run out of the Department of Commerce and by a Director who will work with the Congress, the Administration, and our state and local leaders ... in making this a successful count.”⁶⁵

The Census Bureau, in all matters related to the decennial enumeration and the rest of its activities under Title 13 U.S.C., is subject to oversight. In the 111th Congress, the House Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, and the Senate Committee on Homeland Security and Governmental Affairs, Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security, have conducted decennial census oversight hearings. The Bureau’s operations and funding requests receive further attention from the House and Senate Appropriations Committees. The relevant Appropriations Subcommittees in the 111th Congress are those on Commerce, Justice, Science, and Related Agencies. The Government Accountability Office also has evaluated various aspects of the Bureau’s preparations for the 2010 census and has issued many reports, some of which the present report has cited. Beyond Congress, the MITRE Corporation has advised the Bureau periodically about its IT programs for the 2010 census and, as previously mentioned, noted serious problems with the plans the Bureau once had for Field Data Collection Automation.⁶⁶ The National Academy of Sciences’ Committee on National Statistics (CNSTAT), established in 1972 “to improve the statistical methods and information on which public policy decisions are based,”⁶⁷ is evaluating the 2010 census research program, especially in relation to 2020 census planning.⁶⁸

⁶² See, for example, Jonathan Allen, “White House to Bypass Commerce – and Gregg – on Census,” *CQ Today Online News*, CQ.com, February 5, 2009, 5:54 a.m., at [\[http://www.cq.com/document/display.do?dockey=cqonline/prod/data/docs/html/news/111/news111-000003024858.html@allnews&metapub=CQ-NEWS&binderName=latest-news-binder&seqNum=13\]](http://www.cq.com/document/display.do?dockey=cqonline/prod/data/docs/html/news/111/news111-000003024858.html@allnews&metapub=CQ-NEWS&binderName=latest-news-binder&seqNum=13).

⁶³ H.R. 1254, 111th Congress, introduced on February 3, 2009 by Rep. Maloney and referred to the House Committee on Oversight and Government Reform, would remove the Census Bureau from the Commerce Department and make it an independent establishment. The Director would be a presidential appointee with a five-year term of office.

⁶⁴ See, as examples, Jonathan Allen, “White House: Census Director to ‘Work Closely’ with West Wing,” *CQ Today Online News*, CQ.com, February 5, 2009, 6:34 p.m., at [\[http://www.cq.com/document/display.do?dockey=cqonline/prod/data/docs/html/news/111/news111-000003025792.html@allnews&metapub=CQ-NEWS&binderName=latest-news-binder&seqNum=12\]](http://www.cq.com/document/display.do?dockey=cqonline/prod/data/docs/html/news/111/news111-000003025792.html@allnews&metapub=CQ-NEWS&binderName=latest-news-binder&seqNum=12); Keith Koffler, “Census Control Clarified,” *Roll Call*, March 11, 2009, pp. 1, 22.

⁶⁵ Testimony of Gary Locke in U.S. Congress, Senate Committee on Commerce, Science, and Transportation, *Nomination of Gary Locke to Be U.S. Secretary of Commerce*, hearing, 111th Cong., 1st sess., March 18, 2009 (Washington: 2009), p. 2.

⁶⁶ See Allan Holmes, “Census program to use handheld computers said to be in ‘serious trouble’,” *GovernmentExecutive.com*, January 2, 2008, at [\[http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0108/010208h1.htm\]](http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0108/010208h1.htm). This article contained a link to MITRE’s November 29, 2007 “Talking Points for Meeting with [then-Census Bureau Deputy Director] Jay Waite.”

⁶⁷ See Committee on National Statistics, “About CNSTAT,” at [\[http://www7.nationalacademies.org/cnstat/About_CNSTAT.html\]](http://www7.nationalacademies.org/cnstat/About_CNSTAT.html).

⁶⁸ See, for example, Lawrence D. Brown, Michael L. Cohen, et al., *Experimentation and Evaluation Plans for the 2010* (continued...)

A decade ago, the bipartisan Census Monitoring Board, established under Section 210 of P.L. 105-119 (111 Stat. 2440), scrutinized the objectivity of the 2000 census. Section 210 provided for an eight-member Board, with two members appointed by the Senate majority leader; two by the Speaker of the House; and four by the President, one at the recommendation of the Senate minority leader and one as recommended by the House minority leader.

The function of the Board was “to observe and monitor all aspects of the preparation and implementation of the 2000 decennial census....” Each co-chairman of the Board, along with any staff designated by the co-chairs, was to have “access to any data, files, information, or other matters maintained by the Bureau of the Census (or received by it in the course of conducting a decennial census of population) which they may request....”

The Board was to prepare interim and final reports for Congress. The final report, due by September 1, 2001,⁶⁹ was to “contain a detailed statement of the findings and conclusions of the Board....” All reports were to address, among other matters, the degree to which the Census Bureau’s preparations for Census 2000 “shall achieve maximum possible accuracy at every level of geography”; “shall be taken by means of an enumeration process designed to count every individual possible”; and “shall be free from political bias and arbitrary decisions....”

The law authorized \$4 million in appropriations for the Board in each fiscal year from FY1998 through FY2001. The Board went out of existence on September 30, 2001.

Concluding Observations

The Census Bureau’s mandate to conduct the 2010 decennial census, which would be demanding and costly under the best circumstances, faces additional challenges because the Bureau’s contract with the Harris Corporation to produce handheld computers for Field Data Collection Automation has yielded only partial success. How well the handhelds will perform in the vital address canvassing operation remains to be assessed. The Bureau’s decision not to use the handhelds for nonresponse follow-up has called into question whether a paper-based NRFU will account adequately for historically under-enumerated population groups. Also yet to be determined is the extent to which the Bureau’s ambitious communications strategy will motivate the hard-to-count to comply with the census and will offset any deficiencies in NRFU. Concerns about possible bias in the enumeration, and about whom the census counts, miscounts, or omits, likely will persist in 2010 and beyond because the census numbers serve such important national, state, and local purposes.

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Census (Washington: National Academies Press, 2008).

⁶⁹ The Board’s presidential members and congressional members prepared separate final reports, both dated September 1, 2001.

Author Contact Information

Jennifer D. Williams
Specialist in American National Government
jwilliams@crs.loc.gov, 7-8640